

WHAT IS CLAIMED IS:

1. ~~An apparatus for configuring a RAKE receiver with N fingers, the apparatus comprising:~~

5 a first stage, the first stage configured to use an input signal to find a set of more than N paths;

a second stage, the second stage configured to use the first set of more than N paths to generate a set of N paths; and,

10 a third stage, the third stage configured to use the set of N paths to configure the N fingers of the RAKE receiver.

2. An apparatus as described in claim 1, the first stage configured to use an input signal to find a set of M paths, the second stage comprising M correlators, the second stage configured to use the outputs of the M correlators to generate the set of N paths.

15 3. An apparatus as described in claim 1, the first stage configured to use an input signal to find a set of M paths, the second stage comprising $3 \times M$ correlators, the second stage configured to use the $3 \times M$ correlators to generate M estimates.

20 4. An apparatus as described in claim 3, the second stage configured to use the M estimates to generate the second set of paths.

Sub D17 5. An apparatus as described in claim 1, the second stage configured to use the input signal to generate a new set of N paths.

25 6. An apparatus as described in claim 5, the second stage configured to select the new set of N paths from the first set of more than N paths.

Sub A6
Sub D17
5 ~~7. An apparatus as described in claim 5, the second stage configured to derive the new N set of paths from the first set of more than N paths.~~

8. An apparatus as described in claim 1, the first stage configured to use an output of a matched filter to generate the first set of more than N paths.

9. An apparatus as described in claim 8, the second stage configured to generate a new set of N paths while the first stage is inactive.

10 10. An apparatus as described in claim 8, the second stage configured to generate a new set of N paths while the first stage is active generating a new set of more than N paths.

Sub A7
15 ~~11. An apparatus as described in claim 1, the apparatus further comprising a quality signal, the first stage configured to generate a new first set of candidate paths when the quality signal is less than a threshold value.~~

Sub D17
20 12. An apparatus as described in claim 11, the third stage configured to use paths from the second stage until the first stage generates the new set of more than N paths.

Sub A8
25 ~~13. An apparatus as described in claim 1, the apparatus further comprising a counter, the first stage configured to generate a new set of more than N paths when the quality signal is greater than a pre-set value.~~

Sub B37
14. An apparatus for configuring a RAKE receiver, the apparatus comprising:
an input signal;

a searcher, the searcher configured to use the input signal to find a set of candidate paths; and,

a selector, the selector configured to use the input signal and the set of candidate paths to select a subset of candidate paths that are used to configure the RAKE receiver.

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Sub D17 15. An apparatus as described in claim 14, the searcher configured to use the input signal to find a set of M candidate paths, the selector comprising M correlators, the selector configured to use the outputs of the M correlators to generate the subset of candidate paths.

10 16. An apparatus as described in claim 14, the searcher configured to use an output of a matched filter to generate the set of candidate paths.

15 17. An apparatus as described in claim 16, the selector configured to generate a new subset of paths while the searcher is inactive.

Sub D17 18. An apparatus as described in claim 16, the selector configured to generate a new subset of paths while the searcher is active generating a new set of candidate paths.

20 Sub B47 19. An apparatus for configuring a RAKE receiver, the apparatus comprising:
an input signal;
a searcher, the searcher configured to use the input signal to find a set of candidate paths; and
a selector, the selector configured to use the input signal and the set of candidate
25 paths to select a smaller set of candidate paths.

20. An apparatus as described in claim 19, the set of candidate paths containing M paths, the selector comprising $k \cdot M$ correlators, the selector configured to use the $k \cdot M$ correlators to generate M estimates.

5 *Sub 91* 21. An apparatus as described in claim 20, the selector configured to use the M estimates to generate the smaller set of candidate paths.

Sub 10
99 ~~22. A method for configuring a RAKE receiver, the method comprising the steps of:~~

~~finding a first set of paths;~~

~~searching the first set of paths to generate a set of correlation values; and~~

~~selecting a second set of paths based on the correlation values.~~

15 23. A method as described in claim 22, further comprising the step of updating the second set of paths without updating the first set of paths.

Sub 91 24. A method as described in claim 22, further comprising the step of updating the second set of paths while updating the first set of paths.

20 25. A method as described in claim 23, further comprising the step of updating the second set of paths while updating the first set of paths.

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